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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,453

10/07/2005

Kazumi Nagasawa

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EXAMINER

DAGER, JONATHAN M

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,453	<b>Applicant(s)</b> NAGASAWA ET AL.	
	<b>Examiner</b> JONATHAN M. DAGER	<b>Art Unit</b> 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07 October 2005</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Specification***

The disclosure is objected to because of the following informalities: the disclosure appears to be a literal translation of the foreign application, and thus is replete with grammatical and idiomatic errors.

Appropriate correction is required; should the Applicant file a substitute disclosure, they should be careful not to introduce new matter.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Oniishi (US 5,859,845).

Regarding claims 1, 3, 5, and 11, Oniishi has disclosed a vehicle load control system suitable for use in controlling electric power fed to lamps and motors aboard a vehicle (column 1 lines 6-7).

The load control invention comprises a control section which has a plurality of control switches and generates a control signal corresponding to the actuation of each of the control switches, a multiplex processing section which multiplexes the control signal received from the control section and sends the thus multiplexed control signal to a multiplex transmission line,

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and load control sections which receive the multiplexed control signal sent over the multiplex transmission line and control the electric power fed to a corresponding one of loads on the basis of the thus received control signal (column 2 lines 58-67, column 3 line 1).

Thus, Oniishi has disclosed an invention fully capable of controlling the load electrical parts in the front of the vehicle, a control unit receiving a control signal for controlling the drive of the load electrical part through a main bus line of the vehicle, as well as a drive control unit which is connected to the controller through another bus line, wherein the signal is converted into a drive signal for the load electrical part.

Oniishi also discloses that the mounting position for the invention for the front electrical control unit is mounted next to the driver's seat (column 9 lines 10-12). Thus, the invention is located in the front portion of the vehicle.

Oniishi also discloses that the multiplex communication system employs a centralized control communications protocol which uses the load drive unit A 20 as the master node. The structure of characters of the data comprises one start bit, eight data bits, one parity bit (even), and one stop bit, as shown in FIG. 26. In the drawing,  $T_c$  designates a character time. The frame of the data comprises a header, the data (eight bytes), and BCC (block check characters = a checksum), as shown in FIG. 32A. A predetermined interval period  $T_{ci}$  is ensured between the characters. In the header, a frame number is made up of B0-B3, as shown in FIG. 27B. A transmission unit ID code is made up of B4 and B5, as shown in FIG. 27C. A communication mode ID code is made up of B6 and B7, as shown in FIG. 27D (column 15 lines 66-67, column 16 lines 1-12).

Fig. 1 details a basic block diagram of the load control system. The SW unit 10 is connected to a control section 11. The control section 11 comprises a plurality of switches 11.sub.1 -11.sub.n arranged in a control panel (not shown), and light sources 12 for illumination purposes which are incorporated in the respective control switches for illuminating the surface of the control switch, and a light source 12 for use with an indicator which indicates operating conditions. The control section 11 generates a control signal corresponding to the actuation of each control switch. The SW unit 10 comprises a control section 10b which receives the control signal from the control section 11, being made up of the control switches 11.sub.1 -11.sub.n and connected to the SW unit 10, through an input interface (I/F) 10a, and nonvolatile memory 10g which is connected to the control section 10b and is made up of E.sup.2 PROM holding various data as will be described later (column 7 lines 6-19)

The control section 10b converts the received control signal into control data and generates a transmission frame by collecting a plurality of thus converted control data items. The control section 10b sends the transmission frame to the load drive units A 20 and B 30 through the communication interface (I/F) 10c and the multiplex transmission line 40. Further, the control section 10b outputs a drive signal to a drive section 10e consisting of switching means (not shown) through an output interface (I/F) 10d. Upon receipt of the drive signal, the drive section 10e is activated so as to control the illumination of the light sources 12 respectively provided in the control switches by selectively feeding the light sources the electric power from a power supply 10f. The power supply 10f is supplied with the electric power fed from the battery 50 through the power line 60b. The power supply 10f also feeds operating power to the input I/F 10a, the control section 10b, and the output I/F 10d.

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The load drive unit A 20 is connected to a first electrical equipment group mounted on the body of the motorbus, that is, loads 21.sub.1 -21.sub.n. Further, the load drive unit A 20 is provided with a control section 20b which is connected to the SW unit 10 via the multiplex transmission line 40. The control section 20b receives the control data from the SW unit 10 by way of a communications interface (I/F) 20a. The control section 20b sends a drive signal based on the received control data to a drive section 20d, consisting of unillustrated switching means, by way of an output interface (I/F) 20c. The drive section 20d is activated by the received drive signal so as to drive an associated load by selectively feeding the electric power received from a power supply 20e to the load. The power supply 20e is supplied with the electric power fed from the battery 50 through the power line 60a. The power line 60a led into the load drive unit A 20 is divided into power lines 60b and 60c. The load drive unit A 20 is provided with a fuse F and a fusible link FL which respectively connect the power line 60a with the power lines 60b and 60c (column 7 lines 21-56).

3. Drawings and pictures can anticipate claims if they clearly show the structure which is claimed. See MPEP 2125.

Thus, Oniishi discloses that the front electrical control unit converts the communication protocol of the control signal from the protocol of the main bus line into a communication protocol of the sub-bus line, and transmits the control signal received through the main bus line to the drive control unit through the sub-bus line.

Therefore, Oniishi anticipates all embodiments of independent claim 1.

Regarding claim 2, Fig. 3, clearly illustrates the drive control unit of Oniishi is located in an electronic connector.

4. Drawings and pictures can anticipate claims if they clearly show the structure which is claimed. See MPEP 2125.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oniishi, as applied to claim 1 above, and further in view of Imaizumi (US 5,978,352).

Regarding claims 4 and 6, Oniishi does not explicitly disclose a secondary auxiliary equipment module on which a second load electrical parts of the plurality of load electrical parts and a sensor are mounted. Oniishi only discloses a single auxiliary unit (see above).

Imaizumi, however, teaches the use of multiple slave (auxiliary) and master units. Each of the master load control unit 110 and slave load control units 120, 130 includes therein a communication I/F circuit for transferring (that is, communicating in a multiplexed manner) the load control information between them through the multiplex transmission line 140, an input I/F circuit to which are connected a plurality of switches and sensors (such as a temperature sensor and the like), an output I/F circuit to which are connected a plurality of loads such as lights,

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motors, an air conditioner and the like, a ROM (read-only memory) for storing previously determined programs (inclusive of communication protocol for multiplex transmission) and fixed data, a RAM (random access memory) used as a work area when executing a job determined by a control program, a non-volatile memory (in the present embodiment, an EEPROM is used) for recording and holding load control information, and a CPU for carrying out a multiplexing processing and a majority processing(column 15 lines 57-67, column 16 lines 1-67).

Because both Oniishi and Imaizumi both disclose/teach an invention drawn toward vehicle multiplex transmission system, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute one apparatus for the other to achieve the predictable result of multiple auxiliary units.

7. Simple substitution of one known element for another to obtain predictable results will support a conclusion of obviousness. See MPEP 2143 (B).

Regarding claims 7 and 8, Oniishi discloses that the invention relates to a vehicle load control system suitable for use in controlling electric power fed to lamps and motors aboard a vehicle (column 1 lines 5-7). Further, Oniishi discloses that the load drive unit A 20 is also connected to a first group of detecting switches 22.sub.1 -22.sub.n and sensors 23.sub.1 - 23.sub.n mounted on the body of the motorbus. Signals output from these switches and sensors are input to the control section 20b by way of an input interface (I/F) 20f. Battery relays, lighting switches, and switches for detecting the operation of wipers, micro inversions, and the opening of a door can be mentioned as the detecting switches 22.sub.1 -22.sub.n. The control section 20b uses the previously described input signals when controlling the loads 21.sub.1 -21.sub.n.



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Further, the control section 20b converts the input signals into data and sends the thus converted data to the other units, i.e., the SW unit 10 and the load drive unit B 30, by way of the communications interface I/F 20a and the multiplex transmission line 40 (column 7 lines 38-57).

Thus, the invention of Oniishi is clearly capable of operating such load electrical parts as a clearance lamp and a cornering lamp, as well as providing a control signal to the windshield wiper motor.

Regarding claims 9 and 10, Oniishi, as cited above, is clearly drawn to windshield wiper operation, but does not explicitly state that there is a sensor mounted to monitor the washer fluid level. Imaizumi as well is silent on this exact embodiment, and teaches that each of the master load control unit 110 and slave load control units 120, 130 includes therein a communication I/F circuit for transferring (that is, communicating in a multiplexed manner) the load control information between them through the multiplex transmission line 140, an input I/F circuit to which are connected a plurality of switches and sensors (such as a temperature sensor and the like), an output I/F circuit to which are connected a plurality of loads such as lights, motors, an air conditioner and the like, a ROM (read-only memory) for storing previously determined programs (inclusive of communication protocol for multiplex transmission) and fixed data, a RAM (random access memory) used as a work area when executing a job determined by a control program, a non-volatile memory (in the present embodiment, an EEPROM is used) for recording and holding load control information, and a CPU for carrying out a multiplexing processing and a majority processing(column 15 lines 57-67, column 16 lines 1-67).

Even though it is not explicitly taught or disclosed in either invention, it would be obvious to one of ordinary skill in the art at the time of the invention that the multiplexing systems of Oniishi and Imaizumi, alone or in combination, would clearly render this embodiment obvious since both inventions are drawn toward sensing multiple vehicle control parameters, both programmed or manually activated via switches, and controlling the load distributed to the load electrical parts in response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. DAGER whose telephone number is (571)270-1332. The examiner can normally be reached on 0830-1800 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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28 November 2008

/Jack W. Keith/  
Supervisory Patent Examiner, Art Unit 3663